S/N: 10/605,315 Reply to Office Action of October 7, 2005

# **Amendments to the Specification:**

Please amend numbered paragraph 0005, as shown below:

U.S. Patent Patents 6,407,521 and 6,427,794 disclose hybrid vehicle powertrains having a motor/generator and an internal combustion engine, which function in cooperation with a planetary gear unit to define multiple power flow paths. The engine and the motor/generator provide parallel power delivery through the gear unit during one operating mode. The motor/generator can be used to establish a power flow path independently of the engine as the engine is declutched from the torque delivery path.

### Please amend numbered paragraph 0006, as shown below:

U.S. Patent 6,176,808 discloses a hybrid powertrain wherein an engine and an induction motor act in parallel power flow paths and wherein the engine can be declutched from the powertrain. The induction motor provides torque to complement engine torque during vehicle acceleration. It also can be clutched to the engine crankshaft to permit engine starting.

### Please amend numbered paragraph 0007, as shown below:

In the copending patent application identified above, the disclosure of which is incorporated herein by reference, the planetary gear unit provides a mechanical power flow path between a generator and an engine. A separate motor acts as a secondary power source. The motor may act as a series power source or it may function in cooperation with the engine to establish split power delivery paths through the planetary gear unit. Further, the generator may function as a motor in a purely mechanical torque flow path through the planetary gear unit—with the engine decoupled from the powertrain.

-2-

S/N: 10/605,315 Reply to Office Action of October 7, 2005

## Please amend numbered paragraph 0011, as shown below:

A geared transmission establishes plural power delivery paths between the engine, the motor, and the vehicle traction wheels. The transmission includes a clutch, which can isolate the gearing from the power output portion of the power transmission mechanism powertrain so that the engine can drive the generator.

#### Please amend numbered paragraph 0013, as shown below:

In carrying out the foregoing functions, the transmission gearing includes a first torque input element connected drivably to the engine and a second torque input element drivably connected through a clutch to the motor. The generator is connected to a third element of the gearing, and a reaction brake anchors a first reaction element of the gearing as the engine drives the electric generator in a forward power delivery mode and the motor drives the vehicle wheels through the gearing. When the powertrain acts in this power delivery mode during forward drive, electric motor power complements and engine power are in series.

## Please amend numbered paragraph 0014, as shown below:

During reverse drive a clutch, located between the electric motor and gear elements of the geared transmission, is released to condition the powertrain for reverse drive operation. The engine then drives the generator to charge the battery through a power flow path that is isolated by the clutch from the reverse drive power flow path reaction torque. The direction of rotation of the motor armature is reversed at that time. In another embodiment, a clutch is used to establish a direct drive between the engine and the generator to isolate the power flow path from the reverse torque reaction torque.

S/N: 10/605,315 Reply to Office Action of October 7, 2005

Please amend numbered paragraph 0015, as shown below:

The hybrid electric vehicle powertrain of the present invention makes it possible to eliminate the effect of the ring gear reaction torque of the design of the copending patent application during reverse drive by interrupting a mechanical connection between the ring gear and the gearing at torque output portions of the powertrain.

Please amend numbered paragraph 0022, as shown below:

When the powertrain is operated using the first power flow path, engine power is divided between two power flow paths by controlling generator speed. This implies that the engine speed can be decoupled from the vehicle speed. This results in a mode of operation that is similar to a continuously variable transmission operating mode where vehicle speed changes to do not depend upon engine speed changes. This operating mode can be referred to as a positive power split.